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(19)



(54) A DISPENSING CAP FOR AN AEROSOL BOTTLE

(71) We, COSTER TECNOLOGIE SPECIALI S.p.A., an Italian company, of 27 Via Fabio Filzi, Milan, Italy, do hereby declare the invention for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:-

This invention relates to a dispensing cap for an aerosol bottle provided with a push-button for controlling the dispensing valve.

It is an object of the present invention to provide a dispensing cap of the above-mentioned type which is similar in comparison with known caps.

According to the invention, there is provided a dispensing cap for an aerosol bottle having two concentric skirts, of which the inner skirt is a snap fit on the valve cap of the aerosol bottle, and a push-button, wherein the push-button is provided with a nozzle and a conduit forming a liquid communication between the nozzle and the hollow stem of the valve and has a raised portion for actuation by a user and a radial extension, containing the nozzle and conduit, passing through an opening of the inner skirt and pivotally engaging in a hole of the outer skirt.

Conveniently, said extension has projections at level of the opening in the inner skirt for snap-fitting engagement with the cap.

The invention will be more clearly understood from the following detailed description, given by way of example with reference to the accompanying drawings, in which:

Figure 1 is a diametrical sectional view taken in a vertical direction and showing a cap according to the invention;

Figure 2 is a plan view of the cap shown in Figure 1; and

Figure 3 is a fragmentary sectional view taken along line II-II of Figure 1, but

showing the push-button in plan view.

Referring to the drawings, reference numeral 1 denotes a cap as a whole, having inserted therein (from direction B) a push-button which is denoted as a whole by reference numeral 2.

The cap 1 comprises an outer skirt 3 having a cylindrical outer surface substantially coincident with that of the bottle 4 to which it is fitted, as well as a concentric inner skirt 5 provided at its bottom with toothed portions 6 for snap-fitting engagement with a collar 7 of a conventional cup 8, which is secured to the bottle 4 and supports a conventional valve, of which the hollow stem 9 is shown.

The cap 1 has an upper wall 10. The upper wall 10, the outer skirt 3 and the inner skirt 4 have cutouts 11, 12 and 13 for accommodating the push-button 2. This push-button 2 has a raised portion 14, on the upper side or face 15 of which a finger can be brought to bear when it is desired to dispense the product contained within the bottle 4. A radially extending hollow extension is integrally formed with said push-button and comprises a lug 16, having a hole 17 in which the valve stem 9 is inserted, and an enlarged end portion 18 containing an annular chamber 19, the latter being in liquid communication, through a channel 20, with the hole 17. A conventional dispensing nozzle 21 is inserted into the annular chamber 19. The enlarged end portion 18 is arranged at the level of a hole 22 in the outer skirt 3, the hole 22 having a slightly larger diameter than that of the enlarged end 18.

The inner skirt 5 has a longitudinal opening 23 with raised edges 24 confronting the hole 22. Two extensions 25 which are provided at two diametrically opposite locations on the said enlarged portion 18 and have inclined front surfaces, bear against the edges 24. The extensions 25 pass through the opening 23 with a snap action

with the push-button 2 is inserted in cap 1 in the direction of arrow B. A rib 26 extends longitudinally along said extension and terminates on said raised portion 14 of the push-button.

5 When pressure is applied to the face 15, the dispensing valve is caused to open due to downward movement of stem 9, practically resulting from pivotal movement of the push-button substantially about the edge of the hole 22.

10 To ensure against inadvertent operation and to provide a tamper-proof closure, a tab 27 may be provided above the face 15 or below the raised portion 14. In either case the tab 27 is connected to the cap by means of thin bridging elements 28 which rupture when a suitable pressure is applied to the tab. Only after breakage, can the push-button 2 be acted upon.

20 Of course, both the dimensions of the cap and materials of which it is made may be chosen in accordance with conditions of use.

WHAT WE CLAIM IS:-

25 1. A dispensing cap for an aerosol bottle having two concentric skirts, of which the inner skirt is a snap fit on the valve cap of the aerosol bottle, and a push-button, wherein the push-button is provided with a nozzle and a conduit forming a liquid communication between the nozzle and the hollow stem of the valve and has a raised portion for actuation by a user and a radial extension, containing the nozzle and conduit, passing through an opening of the inner skirt and pivotally engaging in a hole of the outer skirt.

30 2. A cap according to claim 1, wherein said extension has projections at the level of the opening in the inner skirt for snap fitting engagement with the cap.

35 3. A cap according to claim 1 or 2, further comprising a detachable safety tab in the cap above or below said push-button.

40 4. A dispensing cap for an aerosol bottle substantially as hereinbefore described with reference to the accompanying drawings.

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